

AMENDMENT

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently amended) A plasma processing ~~unit~~ system comprising:

- a processing container whose inner pressure can be reduced,
- a first electrode arranged in the processing container, ~~for placing a substrate to be processed thereon~~ the first electrode being supplied a first high-frequency electric power and a second high-frequency electric power,
- a process gas supplying ~~unit~~ part that supplies a process gas into the processing container,
- a tubular supporting part that supports the first electrode, the tubular supporting part forming an enclosed space together with a bottom surface of the first electrode such that said enclosed space is disposed within the tubular supporting part below the first electrode, and
- a high-frequency electric power supplying part arranged in the enclosed space, ~~including a first high-frequency electric power source that outputs first high-frequency electric power having a first frequency,~~
- ~~the first high-frequency electric power transmitted from the first high-frequency electric power source to the first electrode is adapted to generate plasma in such a manner that the substrate to be processed can undergo a plasma process by means of the plasma, and~~
- wherein the high-frequency electric power supplying part further includes comprises:
- a first high-frequency electric power source unit that outputs the first high-frequency electric power having a first frequency,
- a first matching unit for impedance matching of the first high-frequency electric power,
- a second matching unit for impedance matching of the second high-frequency electric power, and
- a transmission line that transmits the first high-frequency electric power from the first high-frequency electric power source unit to the first matching unit.

2. (Withdrawn) A plasma processing unit according to claim 1, wherein the length of the

transmission line is shorter than $\lambda/2$, λ being a wavelength of the third harmonic wave of the high-frequency electric power, and with respect to the third harmonic wave of the high-frequency electric power, an output terminal of the high-frequency electric power source and an input terminal of the matching unit are electrically short-circuited ends, respectively.

3. (Currently amended) A plasma processing ~~unit~~-system according to claim 1, wherein the transmission line has a length which is shorter than $3\lambda/4$, λ being a wavelength of a third harmonic wave of the first high-frequency electric power, and with respect to the third harmonic wave of the first high-frequency electric power, an output terminal of the high-frequency electric power source is an electrically short-circuited end and an input terminal of the first matching unit is an electrically open end.

4. (Currently amended) A plasma processing ~~unit~~-system according to claim 1, wherein the first high-frequency electric power source ~~includes~~ comprises: a first high-frequency electric power generating part that generates the first high-frequency electric power when direct-current power is supplied thereto, and a filter that selectively allows the first high-frequency electric power from the first high-frequency electric power generating part to pass therethrough.

5. (Currently amended) A plasma processing ~~unit~~-system according to claim 4, wherein the first high-frequency electric power source further ~~includes~~ comprises a circulator that allows a forward wave from the first high-frequency electric power generating part to pass therethrough and that absorbs a reflected wave from the first matching unit, between the first high-frequency electric power generating part and the filter.

6. (Currently amended) A plasma processing ~~unit~~-system according to claim 1, wherein the transmission line consists of a coaxial cable.

7. (Currently amended) A plasma processing ~~unit~~-system according to claim 1, wherein the first

frequency is not less than 70 MHz.

8. (Currently amended) A plasma processing ~~unit-system~~ according to claim 1, wherein

a second electrode is arranged in the processing container in parallel with and opposed to the first electrode.

9. (Currently amended) A plasma processing ~~unit-system~~ according to claim 8, wherein

the substrate to be processed is adapted to be placed on the first electrode, and a vent hole is provided in the second electrode to jet out the process gas toward the first electrode.

10. (Canceled)

11. (Currently amended) A high-frequency electric power supplying ~~unit~~ apparatus, comprising:

a first high-frequency electric power source unit that outputs first high-frequency electric power having a first frequency,

a first matching unit for impedance matching of the ~~first-frequency~~ high-frequency electric power,

a second matching unit for impedance matching of second high-frequency electric power,

and

a transmission line that transmits the first high-frequency electric power from the first high-frequency electric power source unit to the first matching unit,

wherein[:]

the high-frequency electric power supplying ~~unit~~ apparatus is arranged in an enclosed space and further arranged for a plasma processing ~~unit-system~~, the plasma processing system comprising-unit-including:

a processing container whose inner pressure can be reduced;

a first electrode arranged in the processing container, the first electrode being supplied the first high-frequency electric power and the second high-frequency electric power, for placing a substrate to be processed thereon;

a process gas supplying unit apparatus that supplies a process gas into the processing container; and

a tubular supporting part that supports the first electrode, the tubular supporting part forming the enclosed space together with a bottom surface of the first electrode such that said enclosed space is disposed within the tubular supporting part below the first electrode;

~~wherein the first high frequency electric power transmitted from the first high frequency electric power source to the first electrode is adapted to generate plasma in such a manner that the substrate to be processed can undergo a plasma process by means of the plasma;~~

~~further wherein the transmission line has a length which is shorter than $3\lambda/4$, λ being a wavelength of a harmonic wave of the first high frequency electric power, and with respect to the third harmonic wave of the first high frequency electric power, an output terminal of the first high frequency electric power source is an electrically short circuited end and an input terminal of the first matching unit is an electrically open end.~~

12. (Withdrawn): A high-frequency electric power supplying unit according to claim 11, wherein the length of the transmission line is shorter than $\lambda/2$, λ being a wavelength of the third harmonic wave of the high-frequency electric power, and with respect to the third harmonic wave of the high-frequency electric power, an output terminal of the high-frequency electric power source and an input terminal of the matching unit are electrically short-circuited ends, respectively.

13. (Canceled)

14. (Currently amended) A high-frequency electric power supplying unit according to claim 11, wherein the first high-frequency electric power source ~~includes~~ comprises:

a first high-frequency electric power generating part that generates the first high-frequency electric power when direct-current power is supplied thereto, and

a filter that selectively allows the first high-frequency electric power from the first high-frequency electric power generating part to pass therethrough.

15. (Currently amended) A high-frequency electric power supplying ~~unit~~apparatus according to claim 14, wherein

the first high-frequency electric power source further ~~includes~~comprises a circulator that allows a forward wave from the first high-frequency electric power generating part to pass therethrough and that absorbs a reflected wave from the first matching unit, between the first high-frequency electric power generating part and the filter.

16. (Currently amended) A high-frequency electric power supplying ~~unit~~apparatus according to claim 15,

wherein the first high-frequency electric power generating part is connected via a cable to a direct-current power source that converts alternating-current power of commercial frequency into the direct-current power.

17. (Currently amended) A high-frequency electric power supplying ~~unit~~apparatus according to claim 11, wherein

the transmission line consists of a coaxial cable.

18. (Currently amended) A high-frequency electric power supplying ~~unit~~apparatus according to claim 11, wherein

the first frequency is not less than 70 MHz.

19. (Currently amended) A plasma processing ~~unit~~system according to claim 4, wherein

the filter has an output terminal connected to the transmission line as an electrically short-circuited end with respect to a harmonic wave of the first high-frequency electric power.

20. (Canceled)

21. (Currently amended) A plasma processing ~~unit~~ system according to ~~claim 20~~ claim 1,

wherein

the high-frequency electric power supplying part has three vertically-stacked boxes; and the first high-frequency electric power source, the first matching unit and the second matching unit are contained in the three boxes, respectively.

22. (Currently amended) A high-frequency electric power supplying ~~unit~~apparatus according to claim 14, wherein

the filter has an output terminal connected to the transmission line as an electrically short-circuited end with respect to a harmonic wave of the first high-frequency electric power.

23. (Canceled)

24. (Currently amended) A high-frequency electric power supplying ~~unit~~apparatus according to ~~claim 23~~ claim 11, wherein

the high-frequency electric power supplying part has three vertically stacked boxes; and the first high-frequency electric power source, the first matching unit and the second matching unit are contained in the three boxes, respectively.

25. (New) A high-frequency electric power supplying apparatus according to claim 11, wherein

the transmission line has a length which is shorter than $3\lambda/4$, λ being a wavelength of a harmonic wave of the first high-frequency electric power, and

with respect to the third harmonic wave of the first high-frequency electric power, an output terminal of the first high-frequency electric power source is an electrically short-circuited end and an input terminal of the first matching unit is an electrically open end.